

Exercise	1	Total	
100%	15	15	
Points			

Name:
Stellar Astrophysics
 Homework - Lecture 19 - Protoplanetary Disks
Due date: November 15

1 Protoplanets in protoplanetary disks

Read the paper by Nagy on protoplanetary disks. Answer in your own words:

1. Why is the collapse of the globules inside the molecular cloud not spherical?
2. What are the main two mechanisms to form planets?
3. What happens to the protoplanetary disk?
4. Why is there no disk in the solar system?
5. What does the author mean when talking about *resonant orbits* ? Look into Table 2. Where do you find the resonance of (3:1) in the system of 55Cnc ?
6. Are there resonant orbits in the solar system?
7. Do you think that the formation of planets more likely around high-mass or low-mass stars?
8. What would distinguish the planetary system around a high-mass star from one around a low-mass star?

Look into Chapter 12 in Carroll & Ostlie in case you have problems with this exercise.